

REMARKS

Status of the Claims

Claims 1-6, 10, 13-20, 24, 27-32, 36, 39-41 and 45 are in the application.

Claims 1-6, 10, 13-20, 24, 27-32, 36, 39-41 and 45 have been subject to a restriction requirement.

By way of this amendment, new claims 48-57 have been added.

Upon entry of this amendment, claims 1-6, 10, 13-20, 24, 27-32, 36, 39-41, 45 and 48-57 will be pending.

Summary of the Amendment

New claims 48-52 are each dependent on claim 2 (Group I) and correspond to claims 3-6 and 10. Support for new claims 48-52 is found throughout the specification and claims as filed.

New claims 53-57 are each dependent on claim 16 (Group III) and correspond to claims 17-20 and 24. Support for new claims 53-57 is found throughout the specification and claims as filed.

No new matter has been added.

Restriction Requirement

The claims have been made subject of a restriction requirement and election of species. The Office has identified two sets of inventions listed below:

Group I (Claims 1-6, 10 and 13), drawn to a method of identifying a unique siRNA nucleotide sequence;

Group II (Claim 14), drawn to a method of inhibiting expression of a target mRNA molecule with a uniquely targeting siRNA;

Group III (Claims 15-20, 24 and 27), drawn to a method of identifying an miRNA nucleotide sequence that does not function as an siRNA;

Group IV (Claim 28), drawn to a method of inhibiting expression of a target mRNA with an miRNA;

Group V (Claims 29-32 and 36), drawn to a uniquely targeting siRNA molecule;

Group VI (Claim 39), drawn to a RISC comprising an siRNA molecule; and

Group VII (Claims 40-41 and 45), drawn to an miRNA molecule.

It is asserted that the inventions in groups I-VII have no special technical feature that defines a contribution over the prior art in Elbashir et al.

Applicants provisionally elect with traverse Group I and elect an oncogene as the elected species for initial examination.

Applicants respectfully disagree with the contentions of the Office that the inventions in Groups I-VII have no special technical feature that defines a contribution over the prior art in Elbashir et al. While the inventions are patentable distinct from each other, they share a common technical feature such that they form a single inventive concept for the purposes of determining unity of invention. Accordingly, the requirement for restriction is traversed.

Elbashir et al. discloses a process of selecting siRNA sequences which include the steps of identifying sequences having 21 nucleotides within a target coding sequence that includes one of several possible sequences at the 5' end of the sequence. Elbashir et al. discloses synthesizing a complementary sequence to this sense sequence which has specific overhanging nucleotides at the 5' end of the sense and antisense strands when a double strand forms. Elbashir et al. discloses performing a BLAST search on the organism's coding sequences using the selected siRNA sequence to determine if any of the organism's other coding sequences will be processed by the selected siRNA sequence. Elbashir et al. does not provide specific parameters of the search. Elbashir et al. discloses that "mismatches in the center of the siRNA duplex are most critical and essentially abolish target RNA cleavage" (page 201, column 1, first paragraph) but does not provide any disclosure of how to identify any of the organism's other coding sequences that may be processed by the selected siRNA sequence other than those having identical

sequences. Elbashir et al. does not provide disclosure which would allow one skilled in the art to determine if the selected siRNA is uniquely functional for the target coding sequence. The claimed subject matter discloses how to make such determination and such a feature is the special technical feature that defines a contribution over the prior art.

The special technical feature in the claimed subject matter which defines a contribution over Elbashir is that the claimed subject matter refers to searching the organism's coding sequences to determine if any of the organism's other coding sequences will be processed by the selected RNAi sequence by identifying if there are any other coding sequences in addition to the target coding sequence which are complementary to an 11 consecutive nucleotide sequence of the selected RNAi sequence including the third nucleotide from the 5' end. Elbashir et al. does not disclose searching the organism's other coding sequences using these parameters. These parameters are useful to ensure that the selected RNAi sequence does not process other coding sequences in addition to the target coding sequence. These parameters are useful to ensure that the selected RNAi sequence will function to uniquely target the target coding sequence without also targeting other coding sequences. The subject matter of the claims provides a special technical features which distinguishes the invention from Elbashir et al.

Under the stander for determining unity of invention, the requirement for restriction is improper and should be withdrawn. Each of the pending claims shares a special technical feature which distinguishes the claimed subject matter from the prior art. Applicants respectfully request reconsideration of the restriction requirement and examination of all claims on the merits.

Election of Species

Applicants have been required to elect a single species of target mRNAs for initial examination on the merits. Applicants elect with traverse mRNA of an oncogene. Each of the pending claims read on the elected species.

The species have been deemed to lack unity of invention because it is asserted that they are not so linked to form a single general inventive concept. It is asserted that the species are not

linked to form a single general inventive concept because the species allegedly lack a special technical feature that defines the claimed subject matter over Elbashir et al.

Applicants respectfully disagree and assert that the species have a common special technical feature that defines a contribution over the prior art in Elbashir et al. While the species are patentable distinct from each other, they share a common technical feature such that the form a single inventive concept for the purposes of determining unity of invention. Accordingly, the requirement for restriction is traversed.

As set forth above, Elbashir et al. discloses identifying a selected siRNA sequence useful as an siRNA for a target coding sequence by identifying a sequence within the target coding sequence that has certain characteristics including length and specific sequences at the 5' end. Elbashir et al. discloses performing a BLAST search on the organism's coding sequences using the selected siRNA sequence to determine if any of the organism's other coding sequences will be processed by the selected siRNA sequence. Elbashir et al does not provide specific parameters of the search. As noted above, Elbashir et al. does not provide disclosure which would allow one skilled in the art to determine if the selected siRNA is uniquely functional for the target coding sequence. The claimed subject matter discloses how to make such determination and such a feature is the special technical feature that defines a contribution over the prior art. Further, such technical feature is present in the claimed subject matter with respect to the generic claims and species.

Under the stander for determining unity of invention, the election requirement is improper and should be withdrawn. Each species shares a special technical feature which distinguishes the claimed subject matter from the prior art. Applicants respectfully request reconsideration of the election of species requirement and examination of all claims on the merits.

DOCKET NO. 130694.02801
PATENT

SERIAL NO. 10/576,481
FILED: May 15, 2008

Conclusion

Claims 1-6, 10, 13-20, 24, 27-32, 36, 39-41, 45 and 48-57 are in condition for allowance. A notice of allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any deficiencies of fees and credit of any overpayments to Deposit Account No. 50-0436.

Respectfully Submitted,

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Dated: August 6, 2009
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